University of Agronomic Sciences and Veterinary Medicine of Bucharest
Faculty of Horticulture

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Chinese jujube after the first growing year at Istrița Fruit Research and Development Station.

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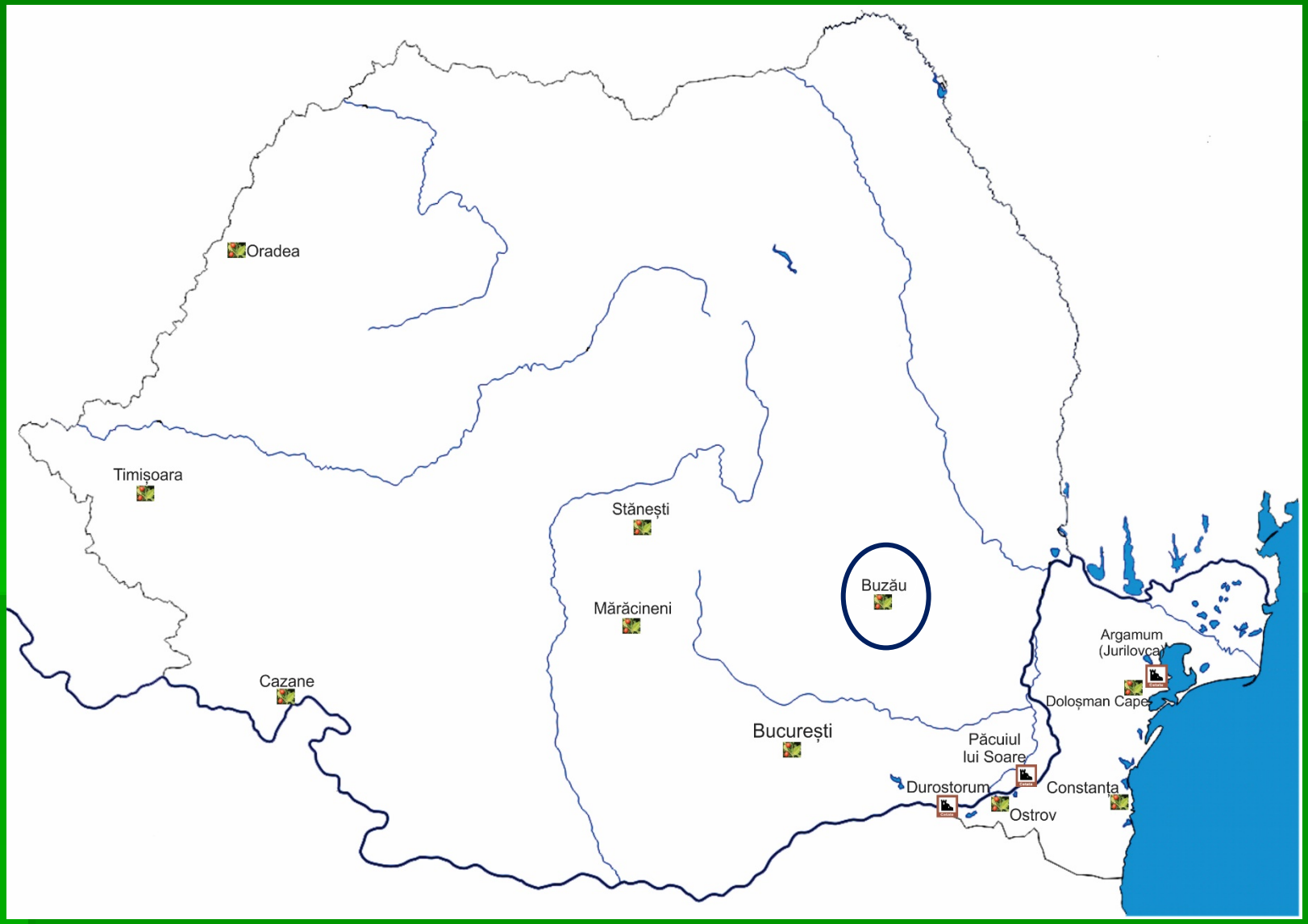
Introduction

The Chinese date (*Ziziphus jujuba* Mill.) is known as one of the most important fruit species belonging to the *Rhamnaceae* family.

Ziziphus jujuba is native to China.

In Romania, jujubes were introduced through the "Silk Road" about 2000 years ago. The Chinese date can be found in the Dobrogea area, where it grows spontaneously, being called by the locals "olive tree of Dobrogea" due to the resemblance of the shape of the fruit, but also of the stone with that of an olive tree.

Distribution of Chinese date (Jujube) to the Romanian territory (Dobrogea Region - South-Eastern part) (Source: Stănică, 2018)



Objectives

- Evaluation of some Chinese date genotypes at the Istrița Fruit Research and Development Station, Buzău through:

- ❑ Fruit size and shape index
- ❑ Average fruit weight
- ❑ Soluble solids (Brix), glucose and fructose content
- ❑ Dry matter

Materials and Methods

- **Location**: Demonstration Field of berries and new fruit species within the Istriţa Fruit Research and Development Station, Buzău.

Materials and Methods

- The Demo Field includes numerous species: blackberry, raspberry, fig, asimina/pawpaw, kiwi, sea buckthorn, goji, currant, blueberry, chokeberry, honeysuckle, persimmon, Chinese jujube, pomegranate, etc.

Materials and Methods

- The Demo field was established in 2019, for *Ziziphus jujuba*, distributed in 3 rows with a length of 40 meters.
- Planting distance: 4.0 x 1.5 m
- Number of plants per row: 26
- The surface between the rows is kept covered with grass
- The rows are modeled and covered with Agrotextile
- Drip irrigation

Material and Methods

Fruits measurement and analysis: Research Center for Studies of Food Quality and Agriculture Products, USAMV București

Analytical balance

Digital Caliper

Laboratory ovens

Material and Methods

Fruits measurement and analysis: Research Center for Studies of Food Quality and Agriculture Products USAMV București

Glucose refractometer%

TSS refractometer Brix%

Fructose refractometer %

Material and Methods

- Chinese date plants were obtained from seeds in the USAMV Experimental field.
- From the first year after planting, the Chinese date (*Ziziphus jujuba Mill*.) produced fruits.

Material and methods

Climatic condition at the Istrița Fruit Research and Development Stations were monitored through daily observation (meteo station):

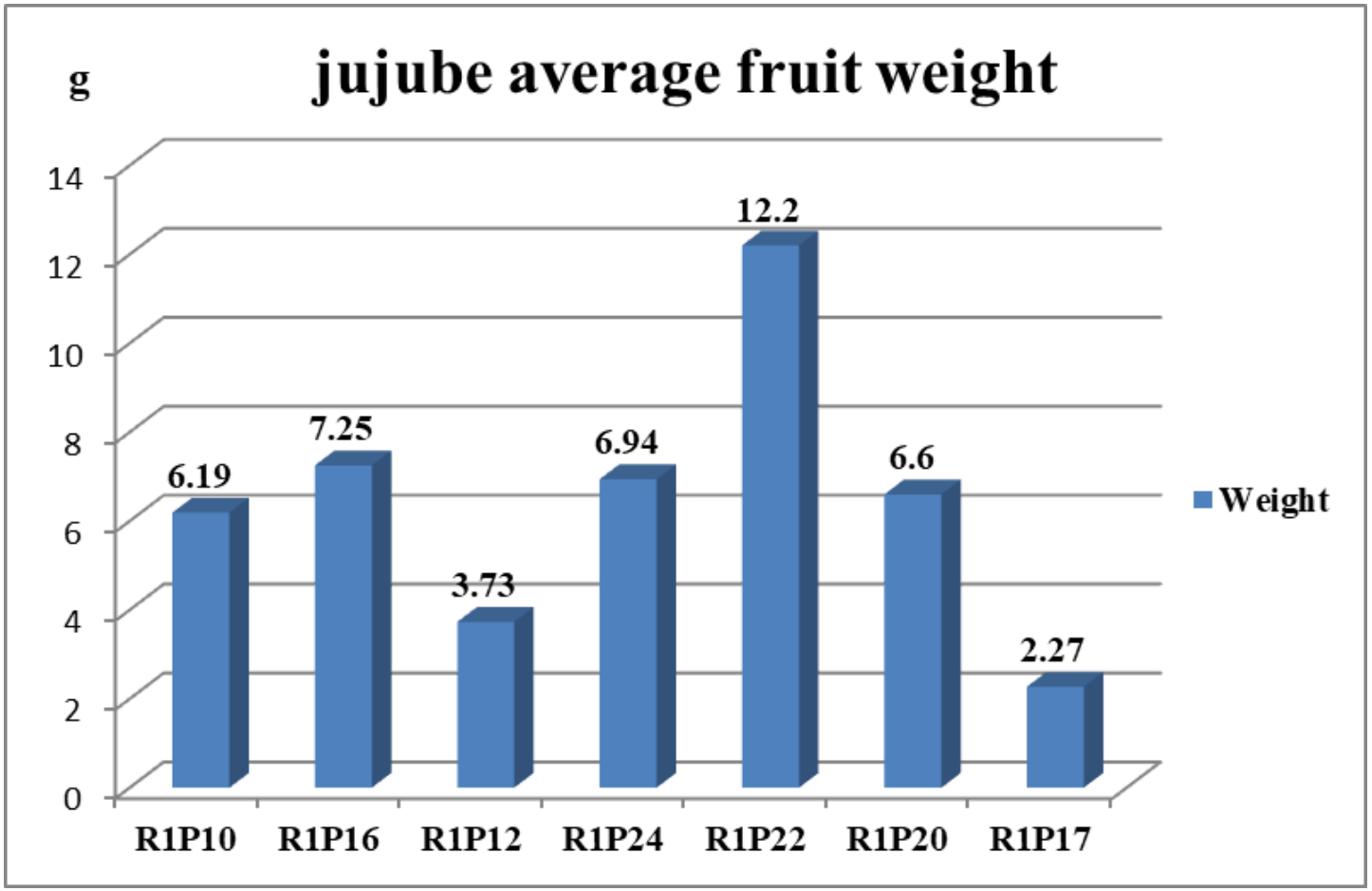
- The climate is relatively dry&hot
- Average annual temperature – 11.3°C

Results and discussions

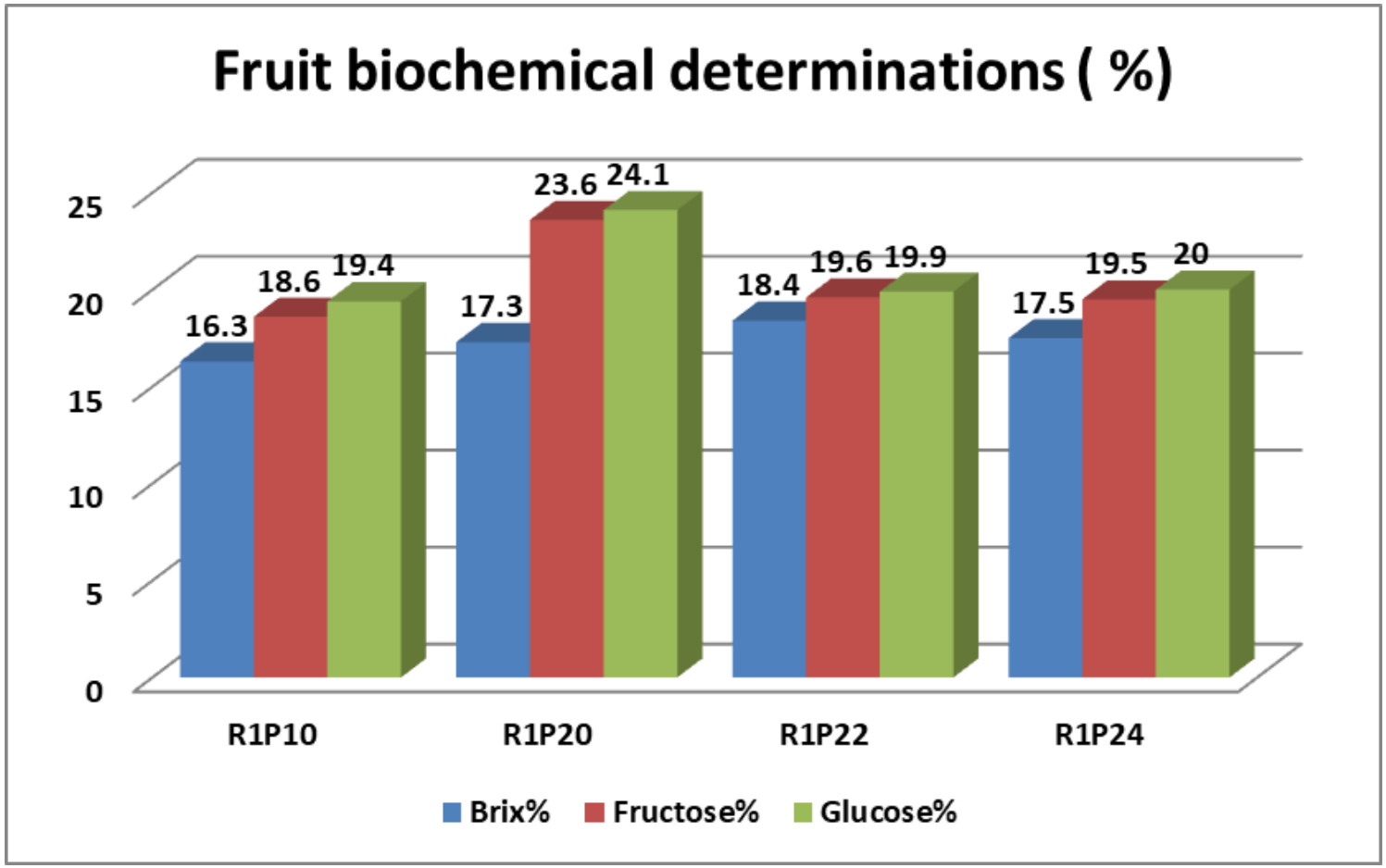
Jujube fruit size and shape index

Genotypes	Fruit height (mm)	Fruit diameter (mm)	Fruit shape index	Fruit shape
R1P10	23.15	21.57	1.07	elongated
R1P16	22.15	23.51	0.94	round
R1P12	23.58	16.62	1.42	elongated
R1P24	38.99	20.93	1.86	elongated
R1P22	33.55	26.21	1.28	elongated
R1P20	24.28	22.41	1.08	elongated
R1P17	14.46	15.73	0.92	round

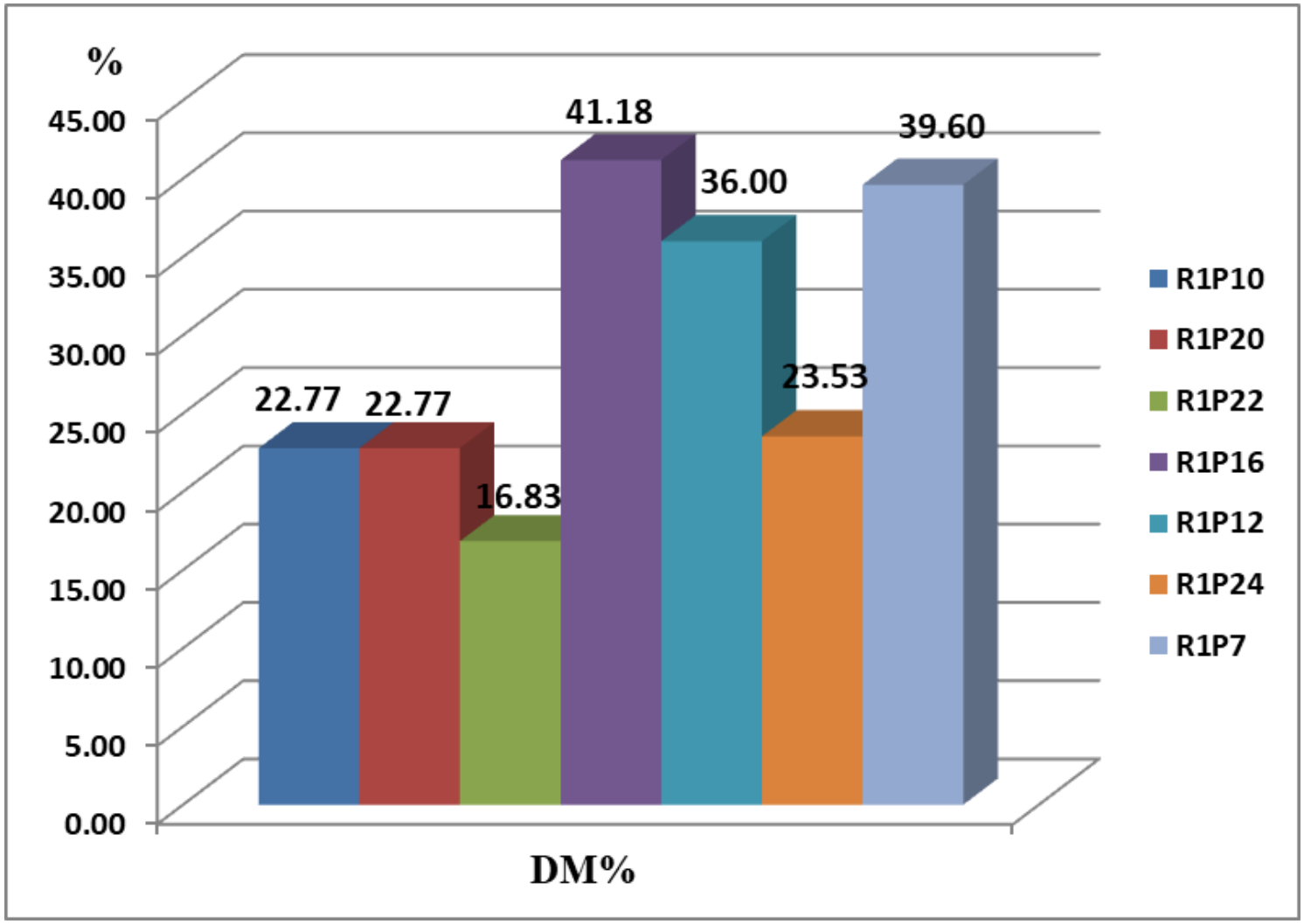
Results and discussion



Results and discussion



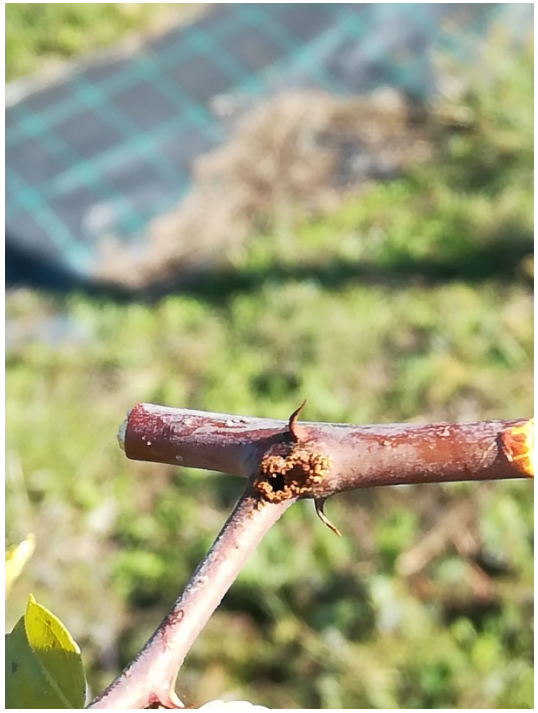
Results and discussion

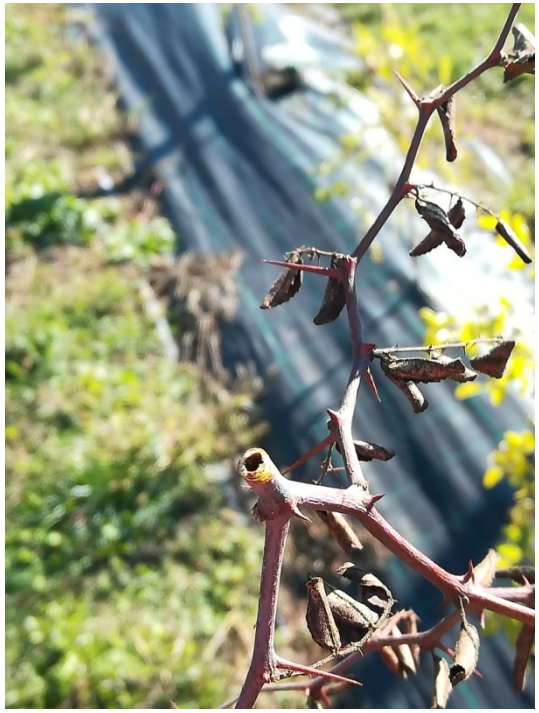


Results and discussion

- Other observations:
- Pests observed in jujube culture in Istrița:

Cossus cossus





Conclusions and recommendations

- One important observation: the precocity of the species in the Istrița area.
- Genotypes R1P22 have promising characteristics. Monitoring will continue.
- Phenology determination are in the same time, with observations on the development and fruiting.
- Grafting will be done in the spring 2021

Thank you for your attention!